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ABSTRACT

This report summarizes visits by a group appointed by the Library Resources Panel of the Committee on Scholarly Communication with the People's Republic of China to libraries, archives, and other institutions in China from September 19 to October 12, 1991. The objective of the visits was to explore the feasibility of a project to enhance the quality of and access to select materials in China. Summaries of the visits to the following institutions are provided: (1) Sichuan University Library, Chengdu; (2) Sichuan Provincial Library; (3) Sichuan Academy of Social Sciences; (4) Chinese Academy of Sciences (Academic Sinica), Chengdu; (5) Sichuan Provincial Archives; (6) Chongqing University Library; (7) Chongqing Municipal Archives; (8) Chongqing Municipal Library; (9) Wuhan Municipal Library; (10) Wuhan University Library, Wuhan; (11) Fudan University, Shanghai; (12) Shanghai Municipal Library (Shanghai Public Library); (13) Shanghai Academy of Social Sciences (SASS); (14) East China Normal University, Shanghai; (15) National Library, Beijing; (16) The China National Microfilming Center; (17) Chinese Academy of Sciences; and (18) Peking University Library. It was concluded that two major factors must be considered when working with Chinese institutions on cooperative projects involving new technology: (1) the highly centralized organization of academic institutions, including libraries; and (2) the unavailability and high expense of equipment. (MAB)

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PRESERVATION AND ACCESS IN CHINA: POSSIBILITIES FOR COOPERATION

Report of a Visit to the People's Republic of China September 19 to October 12, 1991

by
Hans Rütimann, International Project Consultant

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March 1992

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At the first meeting of the Library Resources Panel of the Committee on Scholarly Communication with the People's Republic of China (CSCPRC), held on 23-24 May 1991, it was agreed to explore the feasibility of a project to enhance the quality of and access to select materials in libraries in China. At that meeting, Commission President Patricia Battin and Hans Rütimann were invited to address the panel on the Commission's activities and its experience in dealing with libraries and archives abroad.

The Library Resources Panel then appointed a group to visit institutions in China and to discuss this proposal further. Rütimann's participation in the fact-finding mission was sponsored by the Commission, not only to facilitate discussion of the preservation aspects of the CSCPRC's proposal, but to establish contacts between the Commission and institutions in China and to assess the possibility of linking activities in China with similar efforts in other countries. The following report summarizes Rütimann's visits to libraries, archives, and other institutions September 19 to October 12, 1991.

Sichuan University Library, Chengdu

Sichuan University, founded in 1905, has 10,000 students and 730 faculty in 22 departments. It is one of the most important provincial research institutions, reporting directly to the State Education Commission in Beijing. Originally, it was exclusively a humanities school and expanded later to include science, computer science, applied linguistics, an American Studies Center and a library school. The library has two million volumes and, based on the size of its building and collections, is one of the largest libraries in Southwest China.

After an introduction by the university's vice president, we met with the chief librarian and his staff. He gave an overview of the present situation and explained that the library's catalogue is available as a card catalogue and in 14 printed volumes (eight for Western language and six for Chinese materials), and that it has not yet been automated. The library has 500 exchange partners abroad and specializes in minority literature and in the local histories and economies of Southwest China.

A tour of the library's various departments revealed deteriorated collections and a poorly equipped microfilming facility -- one camera for film and one for fiche, both badly in need of repair. In another room we passed a very modern piece of equipment for duplicating silver halide film; this had been provided by a U.S. foundation. But there was little indication of a production-flow -- except for some sporadic filming of newspapers -- that would justify such a sophisticated copier.

No one seemed aware of the prime culprit: acidic paper. Instead, the library director maintained that his biggest problem is insects and asked which chemicals are most effective in combatting them. During visits to other institutions in Chengdu -- which does have very high humidity -- the same issues were raised with the same results: insects and fungi are viewed as the greatest dangers to the collections, even though the Sichuan University library contains tens of thousands of books, periodicals, and newspapers in extreme stages of embrittlement, the paper discolored beyond yellow to a dark brown that renders the writing practically illegible.

Sichuan Provincial Library

The director of this public library told us that, with four million volumes and 319 staff members, his library is China's fourth largest in terms of "size and importance." The theme of rank recurred in many institutions and indicates a vying for position within the highly centralized governance structure for libraries and archives; university libraries we visited report directly to the State Education Commission in Beijing; public libraries and archives are under the control of the Ministry of Culture, also in Beijing.

The library's microfilming center is one of 15 regional centers whose activities are coordinated in Beijing by the China National Microfilming Center for Library Resources (more about this later). All film produced by the regional centers is sent to the National Microfilming Center, which stores the masters and returns positive copies to the regional center that produced them. No bibliographic records of filmed materials are kept in Chengdu, and we were told that "all this is handled in Beijing."

Here the emphasis is on filming provincial journals (30 reels per month), newspapers (more than 900 titles so far), and materials from 1911 to 1949 with an emphasis on the Sino-Japanese War. There are important war collections in Chengdu, Wuhan and Chongqing, some of China's capitals at the time of the war. Again, insects were the chief preservation concern, with little recognition of brittle books and acidic paper. The director referred further questions about collaborative microfilming, bibliographic records, and preservation to the appropriate national agencies in Beijing. ("We are not authorized to deal with foreign institutions at the local level," he declared.)

There was reference to a computer room and progressing automation, but we did not see a computer, although we asked. "The catalogue is mainly manual," the head of the cataloguing department said.

A tour of the library revealed the same conditions we had found at Sichuan University Library, with row upon row of deteriorated collections. The microfilming facility was far superior to that of the university library. Two cameras were in full production and there was an organized work-flow and good management.

Sichuan Academy of Social Sciences

In his opening remarks, the academy's director of the Information and Documentation Center mentioned that the area in which he needs most help is preservation. He spoke only of insects, with no mention of acidic paper. He did allow, though, that the pre-1949 journals and periodicals are in particularly poor shape "because of bad storage conditions." This is not to underestimate the dangers posed by insects and fungi. The climate and humidity are equal to that of many tropical countries, and we were shown numerous examples of damage done by insects. UNESCO, among many other institutions, has published reports about integrated pest management, yet this information seems unknown in China.

The academy's library was founded in 1978 and is relatively small (500,000 volumes and 1,700 newspaper titles). Our host emphasized the high quality of the professional staff of 60, with one-third having graduated from professional library schools. In some cases, staff members are sent abroad for further training.

All information processing is manual. There is no computer on the premises, nor are there links to other institutions. With contagious optimism, the director assured us that within five years "everything" will be computerized "with an IBM system." There is no microfilming here despite obvious need. "All pre-1969 materials are in need of preservation work, especially newspapers and journals," the director noted. There is an admitted lack of experience concerning preservation, and, again, top priority is given to fighting insects and fungi. It's not clear how this will help the thousands of books and periodicals crumbling at a touch. However, there is a great willingness to learn.

The library's strengths are in contemporary Chinese history and social developments, with an emphasis on the 1930-1967 period. As in other Chengdu institutions, much material about the Sino-Japanese War is available, especially the literature of that period. The president of the academy later stressed his institution's willingness to cooperate and added that he hoped we would get the same impression from the other institutions we visited. "Our library and the academy meet a need for social reform," he observed and concluded on a note of local pride, "Understanding Sichuan is understanding China."

There are exceptions to the generally bad condition of the Sichuan collections. At Sichuan Provincial Library we saw a large collection of provincial newspapers in extraordinarily good shape, with practically no discoloration. It seems that in the 1940s "local paper" was used for the production of newspapers. This local paper was alkaline-based.

Chinese Academy of Sciences (Academia Sinica), Chengdu

Unlike the Academies of Social Sciences, which are largely autonomous at the provincial level, the Academies of Sciences are clearly subordinate to the center. Founded in 1958, the academy's Chengdu branch has a staff of 90 and provides information services to other institutions in Sichuan province. It maintains a database of Chinese periodicals and Western Sci-tech journals ((indexed to the level of articles) and is compiling a regional union list. The largest and most complex database is the national Patent File.

It quickly became evident that the Academia Sinica was technologically the most sophisticated of all the institutions we had visited so far, and the one with the most active ties to the Research Libraries Group, Inc. (RLG). The academy is made up of four divisions: user services, cataloguing, computer, and information retrieval. However, this sophistication and technical know-how is not shared with the university library or the provincial library only a few miles away.

The academy has a library, mostly of recent technical journals (1.2 million items, with 50% foreign journals), and the preservation of paper is not an issue. We did have a conversation about the preservation of texts in machine-readable form and other new media. Even though there was great interest in the issue on a theoretical level, no serious thought has been given to the problem. "We're still trying to automate," the technical director explained. "We don't have the luxury to be concerned about future preservation needs or even data security systems."

After listening to complaints about the high cost of foreign journals, we had a tour of the computer facilities. Though not extensive, there was decent equipment (some display stations with the brand name "Great Wall," which we saw throughout China) and a CD/ROM player with a few disks. Planning to transfer the patent database to optical disks, the academy is working on a conversion program from USMARC to ChinaMARC. Improvements in automation are expected within the next two to three years with the introduction of an IBM mainframe 3081.

Sichuan Provincial Archives

This was the most remarkable of our visits because of what we did not see -- namely, the archives. We were advised that archives are "politically sensitive," but the degree of secrecy was extraordinary. After the usual introductions, the entire senior staff escorted us on a tour of the building's infrastructure: the basement with the electric generators, the sub-basement with the boilers for hot water and heating, and separate rooms with air-conditioners and humidifiers. We were shown the surveillance system, with eight TV screens transmitting images from cameras trained on researchers in the reading room; close-ups actually reveal what a person is reading or writing. This all seemed odd in light of an earlier announcement that the archives are open to the public, including foreigners. When pressed on this, the explanation was that "several levels of permission are required."

The archives have 1.2 million items with many documents dealing with the Sino-Japanese War and 2,000 rolls of microfilm. The need for preservation was mentioned

and we observed their very active conservation department. There are four cameras in operation, and the microfilm operation produces 2,000 frames per day. Automation has been applied here since 1985, the building is well cared-for, and the archives have plans to add a ten-story addition. During the closing conversation, we asked if the archives would share the bibliographic records of microform masters with emerging national and international networks and were told that this was "premature."

Chongqing University Library

We were given a cordial reception by the staff of the library and the university's vice president. The library is located on a sprawling campus on the hill overlooking this industrial and completely polluted town. It is impossible to determine whether it is overcast or sunny -- there rarely is a day when the sun can break through the dense layers of pollution. In addition, it is extremely humid -- 100% humidity is not unusual -- and as in Chengdu, the fight against insects is high on the preservation agenda.

The university, which concentrates on science and technology, has an enrollment of 8,000 undergraduate and 1,500 graduate students. The library owns 1.2 million books and serials -- 800,000 in science and technology and 400,000 in the humanities and social sciences.

For the first time during the trip we heard the term "acidic paper," which the vice president listed right after insects in his outline of threats to the collections....

The vice president of the university stated that it has access to DIALOG's databases and has begun to use CD/ROMs purchased abroad. There are plans for a new building to be completed in 1993. The vice president said that his library's biggest challenge is "facing the 21st century." "To preserve our books and share them with others is a priority. Buying and producing microfilm is expensive and we'd like to cooperate with institutions abroad." Here, too, there is a good collection of documents pertaining to the Sino-Japanese War. For the first time during the trip we heard the term "acidic paper," which the vice president listed right after insects in his outline of threats to the collections; the third and fourth categories were humidity and acid rain. "In all areas we urgently need help and guidance from abroad. Preservation education in China is erratic and I admire the high level of U.S preservation education."

Chongqing Municipal Archives

These municipal archives are nationally important since Chongqing was China's capital during the Sino-Japanese War. The city was also headquarters for the allied forces as well as for foreign news correspondents. Located in a former private residence in a cluster of old but well-maintained houses, the archives consist of 700,000 documents in two

major categories: pre-1949 and post-1949, a common distinction. When the Japanese invaded China's coastal areas, many important archival collections were moved to Chongqing and a few of these collections remained after the war.

Preservation is a major concern; we were told that air conditioning and dehumidifiers provide a controlled environment of under 25 degrees Celsius and not more than 60% humidity (the Chinese national standard for archives). We were not permitted to see the stacks.

Apparently, some paper is brittle and the treatment is simple: a paste is applied to the document, which is then glued onto a larger piece of paper. When we asked about the components of the paste, I was told that among other things it contains alum. "We're dreaming of a microfilm facility but funds are scarce," the archives director said wistfully. All national documents have been moved to Nanking. The most important documents are preserved first; more than one million documents have been "preserved" in the manner described earlier. There is a plan to computerize the catalogue. It became clear during the discussion that we were not going to see these archives either.

Chongqing Municipal Library

The original name of this library, built during World War II, was "Roosevelt Library." It has a staff of 170 and 3.3 million volumes. During the Sino-Japanese War, many famous writers congregated in Chongqing and the library contains a large collection of contemporary Chinese literature. It is open 72 hours per week and serves 15,000 users each year, including 70-80 from abroad.

The microfilming facility with two cameras and one film copying machine produces 500,000 images each year. So far, a large number of books and journals have been filmed and newspapers published during the war with Japan will be next. There are plans to provide more training for preservation personnel and to convert the listings of microfilms to machine-readable ChinaMARC format. At the National Library in Beijing we were later assured that conversion from ChinaMARC to LC MARC -- as it is referred to in Beijing -- does not present a problem, although no one has a program yet. Implementation of all these plans is proceeding slowly because of lack of funds.

A tour through the stacks, the reading room, and the rare book collection was depressing. Thousands of newspapers on shelf after shelf are in such advanced stages of deterioration that they look as if they had been pulled out of a fire. And these materials are still freely handed out to users. We watched readers turn the pages and break them, then either wipe the pieces off the table or put them in back between the pages.

Shouldn't these materials be microfilmed immediately, we queried, to which the deputy director responded: "These decisions will have to be made in Beijing." The Chongqing Municipal Library is one of the 15 regional microfilming centers mentioned earlier and cannot make decisions concerning its own filming priorities; it receives its filming assignments from the China National Microfilming Center in Beijing. For the time being, Beijing's directive to the Chongqing center is to emphasize the filming of rare books in its

collection. The books were piled up, waiting for a camera to be repaired with parts not available in Chongqing; a staff member was dispatched to get them -- in Beijing.

Wuhan Municipal Library

Founded in 1946, the Wuhan Municipal Library originally had only 30,000 volumes. It grew to 1.2 million volumes (210,000 stitch-bound) and a staff of 123 and annually adds 10,000-20,000 volumes to its collection.

A filming project for Chinese rare books has begun, and a listing of the filmed books is available in printed form.

In accordance with government policy, the stacks have been open since 1985. The director emphasized the library's services to the public: He initiated the first bookmobile in China (there are now over 200) and organized a book-lending service to shut-ins and prisoners. He deplored the fact that his library, like all municipal libraries in China, is badly in need of books.

Small bags lying on top of rare books in glass-covered cabinets caught our attention. The director of preservation explained that the bags contain Chinese herbs (lingxiang cao) that repel insects. He stated that ever since use of the herbs was instituted, the library's insect problem has disappeared. Other than the herbs, there is no preservation program in place, except for a few staff members mending books, nor is there a microfilming facility. Upon request from the Central Microfilming Center in Beijing, the library provides materials to any of the 15 regional centers for filming; in return, it receives copies of the film.

During the Cultural Revolution the library was closed but is proud to have received foreign visitors since 1984.

Wuhan University Library, Wuhan

At Wuhan University Library, our group presented papers ranging from "Ownership versus Access" and "Library Education in the U.S." to "Preserving Our Heritage." During a showing of Slow Fires, the audience followed the Chinese narration by James Cheng with fascination. As at other Chinese libraries, the questions following our presentations showed great interest in preservation issues, including the status of research in mass deacidification, longevity of new media, and filming of rare books.

As at other Chinese libraries, the questions following our presentations showed great interest in preservation issues, including the status of research in mass deacidification, longevity of new media, and filming of rare books.

Our afternoon meeting at the university library adhered to the usual format: first, an historical perspective of the university and the library, followed by talks given by the heads of departments. Wuhan University Library, located on a landscaped campus, was established in 1913 and today houses 2.6 million volumes and employs 140 staff members. It is among

the 10 largest libraries in China and one of the six centers concentrating on humanities and social sciences.

The catalogue is being automated, with four staff members dedicated to the task; recent acquisitions are online, with the main computing power provided by the university's equipment (IBM) and five workstations in the library. There is no preservation program to speak of; the director of preservation considers termites the greatest danger to his collections. The stacks are sprayed once a year with a substance containing tobacco, primarily to fight silverfish.

There are two microfilm cameras in the library as well as two reader/printers (all made by Fuji). Chinese rare books have filming priority, and we were asked for advice on handling such materials.

Concluding the meeting, the University's vice president pointed out that any exchange arrangements with foreign institutions would need approval by the State Education Commission (SEDC). (An officer of the SEDC later assured us that individual bilateral arrangements can be made between university libraries and institutions abroad, and that only arrangements involving more than one Chinese university require SEDC coordination.)

Fudan University, Shanghai

Fudan (the term means "early morning sunshine," i.e., the new generation) was founded in 1905 by French missionaries. During the Sino-Japanese War, the university was moved to Chongqing and, like all universities in China, suffered from inactivity during the Cultural Revolution (1966-1976); its faculty was assigned to manual labor in the provinces.

The vice president of the university gave an interesting overview of the institution and of higher learning and libraries in China in general. There are 1,070 institutions of higher learning in the country, 15 of which are "key universities," and among those, five "key-key." Of course, Fudan is "key-key." All funds for the university's operations come from the State Education Commission, which pays on the basis of student enrollment: $2,000 per year for undergraduates and $4,000 per year for graduates. Apparently, Fudan is among those institutions that have the pick of the best students, all of whom must spend a year in the military before starting their studies.

The university allocates the funds for the library's operations and makes most library decisions. The library's director needs approval from the university's president for everything, including hiring and firing. The library serves the university's 10,000 students (this number includes 2,000 graduate students), as well as 200 full professors and 700 associate professors; it contains 3.2 million volumes. The university also runs a nursery school, a kindergarten, and an elementary school for the faculty's children.

Since Russian as a foreign language is no longer mandatory, English has become the most commonly taught foreign language. The coastal city of Shanghai has had a long history of adopting European and U.S. trends more readily than any other Chinese city, and this openness was reflected in the vice president's comments.

For one of China's leading universities, Fudan's automation is limited, a condition which both the university's vice president and the director of the library readily

acknowledged. With the help of the State Education Commission, the university hopes to purchase computer equipment soon and to automate the library's catalogue. The library collection's strength is its rare books, poetry, 3,700 documents of the Qing dynasty, and 3,000 local history gazetteers. The director claimed that, next to Beijing University's library, his library's collections are the most important in China. Since "rare books" had been mentioned by every librarian we met, we asked for a definition: old books, books available in only one copy or very few copies, and books produced with finely carved woodblocks. Later discussions on this subject revealed that there really is no agreement as to what constitutes a rare book. We did get to see what undoubtedly is a "rare book": a scroll, more than 1,000 years old, in remarkably good condition, tucked away in a decorative box.

Some rare books have been filmed but the effort was abandoned because the books were damaged during the process. A word about Chinese books: they do not have hard covers, but are soft-covered with the characteristic pattern of stitch-binding. This means, among other things, that the cover is deteriorating at the same rate as the pages, while the stitching thread usually deteriorates first. The stitch-binding does present problems when the books have to be laid out flat for filming -- it is practically impossible. Ingenious local solutions include cutting a narrow rectangular hole in the table for the stitch-bound part to protrude. There is no glue to worry about; also, at no point did we see any manuscript damage caused by acidic ink as was the case, for example, in Spain's Archivo General de Indias.

Clearly, as we moved from the provinces to the larger urban areas, the preservation focus began to shift away from insects and fungi.

For the second part of our visit to Fudan University, librarians from neighboring universities were invited, among them representatives from East China Normal University, the Shanghai Communications University and the Tongji University. The directors of these university libraries gave brief overviews.

After Slow Fires was presented, the audience centered its interest on the emerging international register of microform masters, deacidification research abroad, and the issues of microfilm vs. digital storage. Further questions related to automation and networking. Clearly, as we moved from the provinces to the larger urban areas, the preservation focus began to shift away from insects and fungi. There are at least two reasons for this: Shanghai has a drier climate and is more exposed to Western influences than, for example, Sichuan province. Although we were led to believe that the Chinese are reluctant to ask questions in a public setting, this certainly was not the case at Fudan University. It was very hard to extricate ourselves after many questions and promises to follow up with publications.

Shanghai Municipal Library (Shanghai Public Library)

This sprawling library in downtown Shanghai has been compared to the New York Public Library (NYPL). The NYPL's building is certainly in better condition. A walk through the rare books stacks, however, was right out of the NYPL sequence in Slow Fires. Rare, stitchbound books (150,000 volumes) are bundled in packs of 10 in ordinary brown wrappers and stored in worm-proof wooden cabinets with glass panels. Handwritten lettering on the wrappers provides information about the contents. As wih every rare book collection we visited, there was a pervasive smell of camphor.

The library, with 10 million volumes and a staff of 500, is the second largest in China (after the National Library in Beijing). "Our conditions are very bad," was how the library's director began his overview. There is insufficient room for the books, inadequate storage space and an overall lack of funds. Automation has barely begun, with individual departments using personal computers. To find qualified personnel for management and automation is one of this library's biggest problems.

Interest in preservation was more intense here than in any other library. During the general meeting and later in a separate talk with preservation staff, we were bombarded with questions about deacidification research abroad and advances in color microfilming. The department has four cameras in operation, one of which is used exclusively for filming family records for a project sponsored by the Genealogical Society of America (Salt Lake City). The other three cameras produce film of pre-1949 newspapers, including a full run of 78 years of the Shenpao. The library owns 10,000 complete or partially complete runs of newspaper titles; 500 titles have been filmed so far.

Interest in preservation was more intense here than in any other library.

This library's pre-1949 collection is unparalleled since Shanghai was China's publishing center before 1949. Its collections of local history during the first half of the 20th century are also valuable and unique.

The library is not yet ready to contribute bibliographic records of its filmed items to an international register of microform masters. A lively discussion on the subject revealed that the Ministry of Culture has issued a directive to the libraries under its jurisdiction (mainly municipal libraries and archives) to use the MARC format in all bibliographic endeavors (ChinaMARC). The staff was very interested in existing and emerging national registers as possible nodes for international sharing of such information. The head of the preservation department solemnly promised that "as soon as we are ready, we will contribute our records." He also mentioned that the library stores its brittle books in "special boxes."

The library director joined us for the final part of the discussion and endorsed the use of both traditional and modern preservation methods. "It is important to preserve the original," he said, but added immediately that his library can afford restoration work only for the most valuable items and has to find additional means to save its collections. "We have to face the 21st century," he said.

Shanghai Academy of Social Sciences (SASS)

Known as an intellectual center, the imposing building of the academy was used by the Red Guards during the Cultural Revolution and re-occupied by the academy in 1978. It is the largest regional research institute of social sciences in China, with a total of 1,216 research and administrative members, among them 66 research professors and 184 associate research professors. The academy's 16 constituent institutes all have their own libraries and publishing programs in fields such as economics, law, history, literature, and religion.

The SASS library has 1.2 million volumes in the social sciences and humanities. Some microfilming of periodicals has been done, but lack of funds and equipment has stalled the effort.

The academy plans to automate its library functions but sees little possibility of a large-scale effort. Funds, equipment and training are in short supply and automation is not a priority. As his most urgent needs, the director mentioned a new library building and microfilming facilities. He would like to start a concentrated microfilming project because practically all books older than 60 years are brittle. This marked the first time we heard the word in China. He estimated that between 10 and 20 percent of the collection already is extremely brittle. "Microfilming is our only solution, especially for our valuable and unique collections. Until we have that capability, we have no alternative but to deny readers access to the materials." The urgency of his comments became understandable during a tour of the stacks. The environmental conditions are bad, with humidity so high that the main preservation effort is wiping mold off books. In certain parts of the stacks, books "flake off" as one walks by.

East China Normal University, Shanghai

This lovely campus is situated amidst palm trees and ponds. East China Normal is one of China's 15 "key universities." Housed in a modern building, the library holds two million volumes and serves 10,000 students. The university plans an expansion and, above all, would like to increase its cooperative projects with institutions abroad. The library also is developing an online catalogue.

A walk through the pre-1974 stacks revealed row upon row of brittle books and newspapers that disintegrate at the touch. There are two cameras (only one working), but filming is haphazard. "Our faculty does not like microfilm," explains the assistant library director. The library owns only 20,000 to 30,000 microfilm images, and therefore it was startling to see a large room equipped with 15 modern microfilm and microfiche readers. Given the negative attitude toward microfilm and the small number of films to work with, it was an incongruous sight. An explanation was difficult to obtain, but finally the details emerged -- the library bought these readers with a grant from the World Bank. We had seen this before: at Fudan University, a room full of new personal computers gathered dust (the keyboards were covered with a thick layer), and at Sichuan University a grant was used to buy a late-model microfilm copier -- but there was little film to be copied. With grant

monies, equipment is acquired with no supporting infrastructure, and no way to use it effectively.

National Library, Beijing

The National Library is years ahead of the libraries we had visited thus far. Located in a splendid building described as Beijing's "pearl of architecture," it is modern, sophisticated and very open to Western ideas and exchanges. It holds more than 15 million items, with the earliest printed documents dating back to the 12th century (many manuscripts are centuries older).

Deputy directors Jin Hongda and Sun Beixin gave an introduction and overview of the library's activities. Sun Beixin began her comments on the library's automation efforts by saying that "we have a long way to go until we reach the level of automation of the Library of Congress." Then she gave a broad survey of the National Library's activities in automation and preservation:

-- There has been no assessment of collection damage, nor any original research on mass deacidification methods, but the National Library follows developments in other countries.

-- Automation of the card catalogue was begun in 1988 with new acquisitions online. Concerning formats, Ms. Sun indicated that the library has been successful in converting a variety of formats, including JapanMARC and ChinaMARC to what she refers to as LC MARC. Apparently, the systems used here can handle 32,000 Chinese characters allowing the management of the traditional characters as well as simplified characters. Incidentally, Sun Beixin is referred to as the "Henriette Avram of China." [Avram, recently retired as Associate Librarian for Collections Services, Library of Congress, is an influential leader in the development of the comprehensive and cohesive computerized bibliographic structure that is now well established nationally and internationally.]

-- Ms. Sun mentioned paper scanners and microfilm scanners, but said these were not yet in operation.

-- Even though efforts to automate the library's catalogues are fully underway, the public card catalogue will be used for the foreseeable future: "Our patrons are used to it."

-- There are 10 microfilming cameras in operation, mainly for filming Chinese newspapers and rare books; the listing of filmed items will eventually be incorporated in the library's main catalogue. "At that point, we would see no problem in sharing this information with others," Ms. Sun added.

-- There has been no serious discussion here about the longevity of new media.

-- All mainframe computer equipment at the National Library is from NEC (Nissan Electronics Corporation).

-- Concerning a joint National Library-Online Library Computer Center, Inc. (OCLC) project: Six staff members of the National Library began work at OCLC in September 1991 on a multi-year retrospective conversion project to input bibliographic Chinese records into the OCLC database for books published in China from 1911 to 1949.

The National Library invited more than 100 librarians, library students and other interested individuals to listen to our talks. After Slow Fires, the questions addressed mass deacidification, pest control, permanent paper, filming of rare books and the preservation of texts in electronic form. Qiu Dongjiang, the Executive Secretary General of the China Society for Library Science, chaired the session.

The China National Microfilming Center

Fifteen regional microfilming centers produce three to four million images per year that are collected, stored and disseminated by the National Center (last year's production was 4.8 million images). Two thousand titles of newspapers from 1850 to 1950 have been filmed so far; a listing may be available in printed form by the beginning of 1992. Rare books and journals are also filmed, and there are plans for a large-scale effort to film periodicals. The National Center assigns filming priorities for the regional centers, and the masters are sent to the National Center, which returns positive copies to the regionals that produced the master negative.

The China National Microfilming Center could possibly become a node in a developing international network to share data about microfilm masters.

Some lists of filmed materials do exist but "a serious automation effort will start at the end of this year." The bibliographic format for the machine-readable data will follow guidelines set by the National Library. Since the library is also under the aegis of the Ministry of Culture, perhaps the two institutions will be successful in working out a common format. The director Li Jing expressed interest in the concept of an international register of microform masters and asked what kinds of records would be required to participate. We talked about exchange formats and minimal recording requirements. With directness, he said, "We are interested in participating."

However, optimism at such a statement should be tempered by awareness of the complexities of Chinese hierarchies and technological/organizational difficulties. Nevertheless, Mr. Li's interest is a step in the right direction.

The center, which we did not see ("there is construction going on"), employs 19 staff members and maintains what amounts to a national collection of microform masters. According to Mr. Li, demands for copies from public libraries in China are filled free of charge. Other institutions pay a fee, but we were not able to find out what it is. The China National Microfilming Center could possibly become a node in a developing international network to share data about microfilm masters. Decisions on what regional centers should film are made here and Mr. Li was clearly interested in filming efforts abroad. There are millions of images in the central collection, and Mr. Li's repeated questions about our view of minimal recording requirements for a register revealed a concern about keeping adequate records of the growing collection of microfilm masters.

Chinese Academy of Sciences

The Documentation and Information Center of the Chinese Academy of Sciences, also called the Library of Academia Sinica, was established in 1950. In 1956, after the Central Committee of the Party issued a call to "march towards science," both the holdings of the library and its personnel increased rapidly. The center now has a staff of 432 and more than five million library units with one million rare books.

Automation of the catalogue is in progress, with 5,000 Chinese titles entered in the database. The academy claims automated links to scientific and technical networks in Europe; it has good connections with RLG, since the head librarian, Yan Lizhong, is a conscientious networker and academy is a participant in RLG's Chinese Rare Book Project. This project, supported by the Henry Luce Foundation and the National Endowment for the Humanities, is an effort to establish an international online union catalogue of Chinese rare books on RLIN, the Research Libraries Information Network - RLG's computer-based bibliographic processing system.

Preservation efforts are hampered by lack of funds, but, for having filmed only about a year, they are making good headway. The center has acquired from Chengdu 30,000 items of the Manchurian Railway Collections; other parts of this valuable collection are at the Number Two Archives in Nanjing and at the Liaoning Provincial Library -- an ideal project for a collaborative filming. With one camera operational, the center hopes to continue filming more than 6,000 rare books, including local gazetteers (2,000 are already done). There is some talk about using digital storage, and the center's director was very interested in relevant research abroad and in preservation initiatives in general.

Peking University Library

Founded in 1902, this impressive library houses four million items, including 220,000 rare books. Automation of the catalogue is in progress and a link to RLIN is planned. The Peking University Library is also a participant in RLG's Chinese Rare Book Project.

This library also uses Chinese herbs to protect its rare books against insects. Two staff members work in a small restoration workshop, and we watched them apply strips of bamboo paper to weakened pages.

With two cameras the library has produced 2,000 rolls of microfilm of early books of the Yuan, Ming and Ching dynasties; filming of pre-1911 newspapers is planned, while other newspapers are being filmed.

Peking University Library also coordinates a retrospective cataloguing project involving 28 university libraries; the materials being catalogued date from 1977 to 1987, as mandated by the State Education Commission. Each participating library sends floppy disks to the Peking University Library, which merges the data from all participating libraries; in the future, the participants will receive a disk with the accumulated data. The database will include 200,000 items, but so far there are no network connections (some 17,000 records were produced in 1991). The project will be combined with a new program involving six major libraries (Peking, Fudan, Nankai, Jilin, Wuhan and Sichuan) in the creation of a national database of current materials in the social sciences and humanities. A parallel plan is contemplated for public libraries.

CONCLUSIONS AND OBSERVATIONS

Chinese librarians and archivists know that the condition of their collections presents a growing problem. However, in the provinces especially, they have not yet put a label on the problem; there is no vocabulary to define it. Acidic paper, brittle books, multi-faceted approaches to preservation and permanent paper all are concepts unfamiliar to the vast

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majority of librarians and university administrators we met in the provinces. On the other hand, most of the libraries we visited contain fine examples of quite old, well-preserved materials. This presents a rich opportunity for the sharing of information.

There are at least two major considerations as we explore working with Chinese institutions on cooperative projects involving new technology.

First is the highly centralized organization of academic institutions, including libraries. Even libraries that are innovative and open to new ideas, exchanges and collaboration with Western institutions cannot proceed -- perhaps with the exceptions of the Shanghai Public Library, the National Library and the Peking University Library -- without obtaining approval from the appropriate central authority (the State Education Commission and the Ministry of Culture). Also, increased accessibility to materials in Chinese libraries and archives (even in copies) is viewed by many with apprehension.

Second is the unavailability and high expense of equipment. The cost of a single low-end personal computer is several times the yearly wage of a clerical worker. However, manpower is available in abundance and at low cost. Repetitive tasks, including the hand-copying of books, can be performed by scores of individuals.

As we have learned in Latin America and in Central and Eastern Europe, we cannot bring our assumptions to bear on the China situation; our interpretation of an equitable exchange arrangement is not necessarily theirs. This should not keep us from trying to work together, a notion supported wholeheartedly by most of the people we met during this remarkable trip.